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## UNIFORM MUNICIPAL ACCOUNTS AND STATISTICS.

*Report by the Special Committee.*

Municipal economics is a field in which comparatively little thorough and comprehensive work has been done. The chief reason why so few efforts have been made and why the results have been so disappointing, is the general lack of comparable facts and figures. This, in turn, is due to the haphazard and multifarious ways in which municipal accounts are kept and the meagerness and diversity of the municipal reports submitted to the public year after year. The first principles of accounting are understood by only a few of the men in charge of municipal records, and even where those principles are known, lack of co-operation between accounting, financial and technical departments results in misleading figures, or such as do not meet the needs of those who wish to make use of them.

A growing recognition of the foregoing facts has led a number of organizations to appoint committees to consider what may be done to secure satisfactory municipal data. The American Economic Association has joined in this movement, by the appointment of a Committee on Uniform Municipal Accounts and Statistics, which respectfully submits this report for your consideration.

In view of the complexity and magnitude of the task in hand, and of the fact that many other organizations are also engaged upon it, proposals have been made for coöperation by the various committees, in order to save duplication of work and diversity of results where the chief object is uniformity, and also to utilize to the fullest possible extent the special knowledge and training

possessed by the members of the various societies. With these proposals for coöperation your committee is in most hearty accord. If they are carried out, it is hoped that a general conference committee may be formed, composed of members from the committees of the various societies, or that some one committee, having a strong membership, and backed by a society that can provide it with funds, will act as a center for the investigation, receiving and correlating plans from sub-committees and finally reporting a complete scheme for uniform municipal accounts and reports.

Some idea of the magnitude of the task undertaken by the various societies may be gained by examining the accompanying tentative list of municipal activities and interests regarding which statistical information is needed. Doubtless the list might be extended. We have not attempted to classify the topics named, since this is a task to be taken up later on, probably by the central or joint committee of the various societies. The list is as follows :

Baths,	Municipal ownership,
Bonded indebtedness,	Museums of art and science,
Bridges,	Parks and playgrounds,
Cemeteries,	Paving,
Charities,	Police,
Courts of justice,	Printing offices,
Crematories,	Public buildings,
Docks and wharves,	Real estate,
Electric lighting,	Recreation,
Ferries,	River gagings,
Finance (general),	Saloon and other licenses,
Fire protection,	Schools,
Franchises,	Sewage,
Garbage disposal,	Sidewalks,

Gas works,	Special assessments,
Gymnasias,	Street cleaning,
Hospitals,	Street lighting,
Insurance,	Street railways,
Jails and prisons,	Street watering,
Latrines, public,	Taxation,
Markets and slaughter	Telephones,
houses,	Telegraph,
Messenger service,	Vital statistics,
Meteorological records,	Wash houses,
	Water works.

As to the details of what the accounts and reports under each head should include, we will not attempt to state at this time, since that is proper work for the societies specially interested in the several subjects. We may say, however, that the accounts should show clearly the cost of construction, depreciation and maintenance charges, should separate ordinary from extraordinary revenue and expenditures, and that the reports should summarize these facts and give in addition full statistical and descriptive information relating to the nature, extent, working and results of the various municipal works and activities. The full reports of the separate departments should be supplemented by condensed annual summaries, largely statistical, for the entire municipality, such as are issued by many European, and possibly a few American cities.

The work in hand, it should be understood, is really divided into two parts, the second dependent on the first : (1) uniform accounting ; (2) uniform methods of summarizing accounts and other information for presentation in city reports, in order to give taxpayers a comprehensive idea of the methods and results of the various city

departments and in order to make possible comparisons between different cities.

Just what part your committee should take in this great co-operative work, will depend largely upon the results of conferences with the other committees, prior to which we hope for full and free discussion from the members of this Association, both at this meeting and by correspondence with the members of the committee.

It has been suggested, and with much force, that this Association might address itself to municipal taxation and finance, bearing in mind that the investigation relates to the recording and publication of facts on a uniform basis, and not to theory, except in so far as theoretical questions now at issue help to determine what facts ought to be recorded and published. As an example of such questions, there may be mentioned: The advisability of placing all taxes on real estate; compensation for municipal franchises; municipal ownership; and the day labor as compared with the contract system of executing municipal works. The statistical information necessary for a proper study of these and many other questions of municipal finance is now lacking, and in hundreds of our cities the accounts are not so kept as to render such a study possible.

The remarks made in the last paragraph open up the whole subject of the need for uniform accounts and reports. This subject was reviewed by the chairman of your committee, prior to the date of its appointment, and the major portion of his discussion is presented herewith as Appendix I. to this report, entitled "Uniform Accounting a Prerequisite to National Municipal Statistics."<sup>1</sup>

<sup>1</sup> *Engineering News*, June 14, 1900, cf. pp. 10-14 post.

The mention of national municipal statistics suggests some consideration of the fact that much, though not all, of the present agitation for greater uniformity arose in the attempt made by the American Society of Civil Engineers, in 1899, to secure the collection of complete municipal statistics by the Twelfth U. S. Census. Directly afterwards, the matter was taken up by the American Society of Municipal Improvements, which already had a committee on municipal data at work on uniform schedules for municipal reports. Between the dates of action by these two societies, the chairman of the present committee called attention<sup>1</sup> to the magnitude and difficulties of the proposed work, pointed out that it could not be undertaken prior to 1902, or until the main inquiries were completed, and asked whether it might not be advisable to entrust the work to the U. S. Department of Labor, which was already engaged in the collection of municipal statistics for cities of 30,000 population and over. Further reflection on the subject showed the necessity of improved methods of municipal accounting, including greater uniformity, before the detailed statistics desired by the two societies just named could be secured, and prompted the discussion on that subject to which reference has been made. While it is true that the best results cannot be obtained until the reforms sought by this and similar committees are effected, it is probable that something in the way of municipal statistics will be collected by the present Census Office, and it is certain that meanwhile the U. S. Department of Labor will continue its inquiries. It is, therefore, pertinent to discuss the question of how much the Census Office ought to undertake, in view of

<sup>1</sup> See editorial, "Municipal Statistics in the Census of 1900," *Engineering News*, July 27, 1899.

the obstacles to be encountered, and also to ask whether the money required for such work would not yield better results if devoted to an extension of the work of the Department of Labor.

During the past six months a number of societies, besides the two named and this Association, have turned their attention to the subject under discussion, and it is a notable fact that nearly all the attention has been concentrated on the question of uniformity, which shows a realization of the need for reform in that particular before the most effective work in the collection of statistics can be done. A list of these societies, twelve in all, with the membership of the several committees, is appended to this report for the convenience of all the workers in this field. (Pp. 28-29 post.)

It should not be inferred from the emphasis laid upon the lack of uniform municipal statistics, that no attempts to that end have been made before. On the contrary, two societies adopted uniform schedules for statistical summaries in water works reports, years ago, and a few others did some work of the same sort before the present agitation began. These attempts were purely voluntary. In addition, a few of our states have recognized the importance of proper municipal accounting and have placed the matter, more or less completely, in the hands of a central state department. Others have proposed boards of municipal control, to have charge of this and other matters relating to cities and towns. The chief results thus far secured, in the way of state control, have been where a commission has been given charge of a single class of municipal service, whether under public or private ownership, such as gas and electric lighting or street railway work. These three lines of effort (voluntary association, general and special state control) were

reviewed in some detail by the chairman of this committee, last July,<sup>1</sup> as will appear on referring to Appendix II. of this report, "Progress Towards Uniform Municipal Statistics in the United States."<sup>2</sup>

Your committee submits the following conclusions :

1. That the interests of good municipal government, economics and public finance demand the collection and publication of state and national municipal statistics.

2. That such statistics, to be of service, should be based on uniform municipal accounting.

3. That, as a rule, American municipal accounting is in a most deplorable condition, being unsystematic, incomplete and misleading ; with little correlation between the accounts of different departments of the same city, and the utmost diversity in the accounts of different cities, rendering comparison of the working of different departments and cities always difficult and often impossible.

4. That certain mooted questions of public policy, like municipal ownership, and day labor as compared with the contract system of executing public work, can never be thoroughly or properly studied until greater uniformity in municipal accounts and reports has been secured.

5. That coöperation between the various economic, sanitary, engineering and other technical societies interested in or devoted to municipal affairs, or some branch thereof, should be encouraged, to the end that uniform schemes for municipal accounts and reports, covering the various municipal undertakings and interests,

<sup>1</sup> *Engineering News*, July 5, 1900.

<sup>2</sup> The review has been extended, to bring it down to the close of the year 1900.



whether in public or private hands, may be formulated and adopted.

6. That after the formulation and adoption of these schemes by such coöperative effort, it is desirable that steps should be taken to put them into use by the various municipalities of the country, either under the direction of state boards of municipal control, or special state commissions for different classes of undertakings and interests.

7. That a yearly comparative summary of the municipal statistics of the whole country, made and published by some branch of the national government, would place much valuable information within the reach of many investigators, to whom it would otherwise be unavailable, through lack of time to compile it, or through the impossibility of securing the many necessarily scattered reports.

8. That the summary of statistics for cities of 30,000 and upwards, compiled and published by the U. S. Department of Labor in 1899 and 1900, should be continued, pending improvements in municipal accounting, and that the present Census Office should make an exhibit showing the nature and general extent of municipal activities (a true census, or count) which would serve as a basis for more detailed inquiries after the organization of a permanent census or other statistical bureau, with a staff of experts in municipal engineering, sanitation, vital statistics and sociology, finance and economics generally.

In conclusion, your committee considers this as merely a progress report, owing to the comparative recentness of this agitation and the large amount of work yet to be done. If the Association sees fit to continue the com-

mittee, it requests authority to coöperate with other societies for the attainment of the aims set forth in the above resolutions.

M. N. BAKER, Chairman,  
H. B. GARDNER,  
CHAS. J. BULLOCK,  
EDW. W. BEMIS,  
E. DANA DURAND,  
F. R. CLOW.

## APPENDIX I.

### UNIFORM ACCOUNTING A PREREQUISITE TO NATIONAL MUNICIPAL STATISTICS.

(BY THE CHAIRMAN.<sup>1</sup>)

One of the greatest drawbacks to municipal progress is the lack of correlation and co-operation between the different departments composing city governments and the still lesser degree of co-operation between cities as a class. Although this is true to a large extent the world over, it is more strikingly so in America than in some other countries, owing largely to our lack of central administrative control, both in city and State. In England, which in many respects is less highly centralized than other European countries, we find nearly all municipal functions in the hands of councils, while the actions of those bodies are controlled to a marked degree by the Local Government Board. In the United States the control of public works by city councils has been in inverse proportion to the number and magnitude of the works in hand; that is, one branch after another of municipal service has been cut off from the council and entrusted to separate commissions, until it is not thought strange here to find a single city with water, sewer, street, fire, health and lighting departments, entirely separate and independent of each other and of the city council, except that some, but by no means all, of these departments may be compelled to look to the council for appropriations.

As between the several municipalities<sup>2</sup> of a single State there is often scarcely a common tie, save that each and all are under the same constitution and the control of the same legislature. Most of the constitutions, however, were drawn before our cities attained to anything like their present rank; and the cities and towns are operating, in so many instances, under special charters and acts, that a common legislative control means comparatively little in common after all. Cities in different States of the Union have absolutely nothing in common, of necessity, except a few rights to individuals guaranteed by the Federal constitution.

When our cities were small all these dissimilarities were of little moment; in fact, many of them did not come into existence until brought out by the enormous municipal development of the last few decades. But with the growth of municipal functions, correlation

<sup>1</sup> Slightly condensed from an editorial in *Engineering News* for June 14, 1900.

<sup>2</sup> Municipality, in the broadest sense of the word, includes the minor civil divisions of a state—counties, cities, towns, boroughs and villages. There is a strong tendency, however, to restrict the word to urban, as contrasted with rural communities.

and co-operation are becoming of the greatest importance ; otherwise progress is retarded by useless and easily avoidable friction between departments of the same city and between rival cities and towns, and both municipal departments and different municipalities will fail to profit by the experience of predecessors in the same or similar paths.

One of the greatest opportunities for advance is a thorough-going reform in municipal accounting, notably in the direction of uniformity. The need for uniform municipal accounting is becoming more and more evident. It is forced home upon every committee and official appointed to learn how other cities and towns are solving a given problem ; upon every convention of municipal officers ; and upon such governmental departments of the State or nation as undertake the collection of information relating to cities. The deplorable lack of uniformity found by all investigators is not confined to differences between states or cities, but extends to the various departments of almost every city and village in the land ; nor does it stop here, for it is a common thing to find a single department changing the plan or scope of its bookkeeping year after year.

It seems obvious enough that a water-works, sewerage or lighting department of a city must follow a well-conceived plan of accounting year after year if it is to know where it stands and judge of the success or failure of both old and new methods of work. Yet the vast majority of municipal departments have wofully deficient systems of bookkeeping at the outset and annul a large part of the value of those by frequent changes and omissions of details, and even suspensions of accounts. In thousands of cases, departments of more or less importance really keep little or no more than a cash account, subdivided, perhaps, to correspond roughly with the various branches of the department, but with entries most unsystematically distributed to the branch accounts whenever the slightest complexity arises. Charges against or in favor of another department are comparatively rare ; or if made are mere debit or credit items in a general cash account. If a water department supplies cast-iron pipe from its stock to the sewer department no entries may be made on the books of either department ; while if cash is paid for the pipe it is likely to be entered with the ordinary receipts (revenue from water consumers) of the water department and stands only a fair chance of being properly accounted for in the sewer department. But if, instead of pipe, the water department supplies water to the public schools, sewer, fire and street departments, probably in nine cases out of ten the water department gets no credit whatever for the services rendered. This is a serious matter, particularly in the case of the fire department, since a large part of the original cost of a water-works system, and hence of its capital charges, is due to making the works ample for fire protection, and therefore should fall upon the property benefited, rather than the water consumer. If the burden were properly distributed it would be easier to raise funds to improve the character of the water supply and

also to reduce water rates, so the blessings of pure water would be extended and the health of the community greatly increased.

These are only a few of the evils of haphazard accounting as affecting single departments. Others, and plenty of them, will occur to any intelligent observer on a moment's reflection, chief among which may be mentioned the uncertainties surrounding the great problems of municipal ownership,<sup>1</sup> the contract as against the day-labor plan of carrying out municipal works and the agitation for a "living wage," which is getting to mean \$2 a day for eight hours labor on all municipal work. How can such momentous questions as these be decided when a city keeps its accounts in such a manner that even the first cost of its lighting plants, water-works, sewers or streets cannot be ascertained, much less the respective operating expenses?

Where such confusion exists in single departments the evils are increased when the city as a whole is considered. One department can learn little or nothing from the experience of another, because the accounts of each are improperly kept and there is no attempt at keeping any of them on a comparative basis. It being next to impossible, if not quite so, to ascertain the real financial standing of a single department, the status of the whole city is a hopeless problem. What this means in rates of interest and premiums on bond issues, and in contract prices for materials and supplies, no one can estimate, but it is safe to say that there are not many cities in the United States where needed reforms or improvements in accounting would not save their cost many times over each year in the reduction of interest charges and contract prices. In fact, hundreds of cities would save money in their accounting departments alone by the introduction of improved methods.

When it is so difficult to harmonize the accounts and compare the results of different departments of the same city, attempts to profit by the experience of other cities, so far as it is shown by statistical and other reports, are almost hopeless. The task of collecting information from a few neighboring cities is discouraging in itself, but when attempts are made to compare the meager data obtained, so many discrepancies are found that hope yields to despair. At least such is the case with the trained statistician; but unfortunately the council committees that undertake so many of these investigations are rarely trained statisticians or appreciative of the value of such persons: so the figures are put together somehow and made to fit a preconceived or ill-conceived theory, and money and perhaps human lives are sacrificed as a result.

A consideration of uniformity in municipal accounting is timely just at present, when the attention of the whole country is turned to our twelfth national census. It has been urged by a number of or-

<sup>1</sup> See "Uniform Accounting for Gas and Electric Lighting Companies," by Jas. Blake Cahoon, read before the National Electric Light Association, at Chicago, May 23, 1900.

ganizations, of late, that the present census should include comprehensive inquiries relating to municipal affairs. Thus far, all the requests of the sort addressed to the Census Office have been met with the general statement that under the statute governing the present census municipal inquiries cannot be taken up until the schedules of population, vital statistics, agriculture and manufacturing have been completed, or until about 1902.

As was pointed out (by the chairman), in *Engineering News* of July 27, 1899, in an editorial on "Municipal Statistics in the Census of 1900," the act providing for the twelfth census is so broad in this particular that

it would seem as though the only limitations on the scope of the municipal inquiries for the next census would be the wishes of the director, the funds at his disposal, the inherent difficulties of the task and matters of general expediency.

The greatest of the "inherent difficulties of the task" is the lack of uniform municipal accounting. If this be true, the advocates of the inclusion of detailed municipal inquiries in the next census should bend their energies towards the removal of this obstacle. That it is time to do so no one who has examined many departmental reports of American cities and towns will deny. As an example of what may be learned by this sort of experience, the following may be cited: In the editorial mentioned above it was stated that the U. S. Department of Labor had been authorized by Congress to collect and publish statistics for cities of 30,000 population and upwards. The result of the first attempt was issued a few months later.<sup>1</sup> In the introductory remarks to this bulletin it is stated that the act authorizing the inquiry evidently contemplated a compilation of statistics from municipal reports. On request, many of the officials concerned sent their reports, but some cities stated "that no printed reports were available, while in other cases no reply whatever was received." But this was only the beginning of the difficulties encountered, for:

An examination of the reports received showed that very few facts were reported uniformly by all the cities, and that even the important financial statements were presented in so many different forms as to preclude such classification of the various items as seemed necessary for a satisfactory comparison. \* \* \* Even had the Department been furnished with the reports for all the cities within the limits of the investigation, the many difficulties encountered in a tentative effort with the reports already received led to the conclusion that uniformity and accuracy could only be secured by sending the special agents of the Departments to the cities for the data desired. \* \* \* In many cases the methods of bookkeeping in vogue made a uniform classification of financial items, as called for by the schedules of the Department, very difficult and required much time and labor.

This inquiry covered only 140 of our largest cities, in which accounting systems above the average might be expected. It was conducted by "special agents," presumably of at least fair training in

<sup>1</sup> "Statistics of Cities," Bull. Dept. Labor, No. 24, Sept., 1899. Edited by Carroll D. Wright, Comr.

such work. Therefore all persons with a vivid imagination can picture for themselves the difficulties involved if census enumerators with qualifications similar to those employed in the past were to undertake to cover the 3,500 to 4,000 communities in the United States having public water supplies, or even the cities and towns of 4,000 population and over of which 905 were shown by the census of 1890.

## APPENDIX II.

### PROGRESS TOWARDS UNIFORM MUNICIPAL STATISTICS IN THE UNITED STATES.

(BY THE CHAIRMAN.<sup>1</sup>)

The work thus far accomplished in the United States in the way of uniform municipal accounts and reports has proceeded along three main lines: (1) State supervision of accounts, sometimes involving state audit, and in one or two instances, at least, including annual reports to a State officer on forms prescribed by him. (2) State administrative control of certain local interests or industries, such as street railways, lighting plants, sewerage systems, water-works, vital statistics, assessment and taxation and public schools. (3) Voluntary action by organizations devoted to some branch of municipal activity, such as water and lighting plants, pavements and sewers, street railways and municipal laboratories. Much of the work done by these organizations has gone no further than the mere adoption of schedules, and often these have fallen to the ground by their own weight, through over-elaborateness, or else because of the apathy of the members, or the lack of proper men or funds to carry out the desired reforms. There has been one notable exception in evidence for a dozen years, and some promising new moves are now being made.

#### STATE SUPERVISION OF MUNICIPAL ACCOUNTS.

The principal successful attempts to secure State control of municipal accounts (other than county) in this country seem to have been in Wyoming, Virginia and Indiana, where certain classes of municipalities are required by law to report annually to the State Auditor, or some like official.<sup>2</sup>

<sup>1</sup> Slightly modified and brought down to date, from *Engineering News*, July 5, 1900.

<sup>2</sup> The following references to the literature of this subject and the broader one of State Boards of Municipal Control, both here and abroad, will enable those interested to pursue the subject further:

"State Supervision for Cities," by Prof. John R. Commons. *Annals American Academy of Political Science*, vol. v, p. 37 (1895).

"State Boards of Municipal Control," by Fred'k. Wm. Holls, Proc. National Municipal League, 1896.

In Alabama, Kansas, Massachusetts, Minnesota, New York, North Dakota and South Dakota, according to Prof. J. W. Jenks (see footnote), State Examiners or similar officers were in existence in 1898, with more or less control over county accounts. Some or all of these officials control State accounts as well, all of which shows that the movement towards the State supervision of accounts is well under way.

The office of State Examiner was established in Wyoming by the Legislature of 1890-91 (Session Laws, Chap. 84). Besides the supervision of the State institutions and private companies engaged in banking and loan operations, his jurisdiction extends over county, city and town officials, including school districts. According to an excellent summary given in Professor Tooke's article (see list of references in foot note) :

The state examiner is empowered and it is his duty to exercise a constant supervision over the books and financial accounts of the municipal corporations of the state. He is required to order and enforce a correct, and, as far as practicable, uniform system of bookkeeping by state, county and municipal officers, so as to afford a suitable check on their action, and to insure the safety and a thorough supervision of the funds of the state and of the counties and other municipal corporations. He has full power to expose false or erroneous systems of accounting, and, when he deems it necessary, to instruct the local officers in the proper methods of keeping their accounts. He may require, from time to time, complete and verified statements of their accounts, and must visit each year, at irregular intervals and without notice, the county officers, and make a thorough examination of the books, accounts and vouchers of such officers. He must, upon request of the city council of any municipality, make a like examination of the accounts of the city and report in the first instance to the council.

In order that these powers may be fully exercised, he may issue subpoenas and administer oaths in the same manner and with the same power to enforce obedience thereof as belongs to the courts of law

"Suggestions for the Study of Municipal Finance," by Prof. Frederick R. Clow. *The Quarterly Journal of Economics*, vol. x, July, 1896.

"Municipal Statistical Offices in Europe," by Dr. Edw. M. Hartwell, City Doc. No. 94 (1897), Boston, Mass.; also, in part, in *Municipal Affairs* for Sept., 1897.

"Uniformity in Municipal Finance," by Prof. C. W. Tooke; and "A State Municipal Board," by Prof. J. W. Jenks. *Municipal Affairs* for June and September, 1898, respectively.

"Public Accounting Under the Proposed Municipal Program," by Prof. L. S. Rowe, and a number of other papers on municipal accounting, Proc. National Municipal League, 1899 and 1900; also (Professor Rowe's paper) in "A Municipal Program." The Macmillan Co.

Facts relating to the work done under the Wyoming law, in "Examinations of Public Accounts" and in "The Benefits Derived from Uniformity and Independent Auditing of Public Accounts," were given in papers by Harry B. Henderson, State Examiner of Wyoming, before the National Municipal League and the League of American Municipalities, respectively, at their annual conventions in 1900; also in Prof. Tooke's article (cited just above).

"English Local Government of To-Day. A Study in the Relations of Central and Local Government," by Milo Roy Maltbie; "The Centralization of Administration in New York State," by John A. Fairlie; and "Public Administration in Massachusetts," by Robt. H. Whitten; Columbia University Publications, 1897 and 1898.

Besides these special papers and books, reference may be made with profit to Prof. Frank J. Goodnow's "Municipal Problems and Municipal Home Rule," and Dr. Albert Shaw's "Municipal Government in Great Britain" and "Municipal Government on the Continent of Europe."



of the state. Any officer refusing or neglecting to make the required returns, under oath, is to be deemed guilty of felony and to be punished by a fine not less than \$1,000 and not exceeding \$5,000, or by imprisonment in the penitentiary not less than one year nor more than five years, or both. Any person making an exhibit, or giving information required, or making any statement under the act, upon oath, who shall knowingly swear falsely concerning the same, is to be deemed guilty of perjury. Any person who shall willfully obstruct or mislead the state examiner in the execution of his duties is guilty of felony and punishable as are officers refusing to make the required returns.

In the enforcement of these provisions the examiner reports to the attorney general, or to the prosecuting attorney of the county, the refusal or neglect of county officers to obey instructions, and such officers must take prompt steps to enforce a compliance on the part of local officials. Further, the examiner may report to the governor at any time any failure of duty of any public official under the supervision. The governor thereupon may, if he thinks the public interest requires such action, suspend such officer from further performance of duty, until a more complete examination can be held or such security obtained as may be demanded for the prompt protection of the public funds. In the case of the discovery of any defalcation in the office of the treasurer of county, city or school district, the examiner is authorized to take immediate control of the office, funds, books and accounts of such officer, and to act as treasurer until such time as the officer accused may be reinstated or finally removed and his successor appointed.

In carrying out the duties of the office, the examiner passes upon every account paid by the order of the county commissioner, to determine whether it is prepared in compliance with the statute, and personally vouches for the form of all bonds given by municipal officers. In general, his supervision extends directly to every account of the counties and indirectly to all the financial operations of other municipal corporations.

Provision for an Examiner of Public Accounts was made in Louisiana in 1892 (Session Laws, Chap. 72). The act authorized the Governor to require this officer to investigate the affairs of any parish. No appropriations were made for carrying out the provisions of this act, and it was repealed in 1894.

The Virginia Legislature of 1898 (Session Laws, Chap. 895) passed an act providing that city and county treasurers must report annually all receipts and expenditures to the auditor of public accounts, according to forms prescribed by him, and that he should publish an abstract of these reports.

A recent Indiana statute (March 3, 1899), provides for the use, by all the township trustees of the state, of a common schedule to be prepared and enforced by the State auditor. The county law of the same date practically secures the same result for the counties by providing for a more systematic preparation of their budgets.<sup>1</sup>

Two attempts, thus far unsuccessful, have been made to establish a comprehensive municipal government board for the State of New York. Their failure, it is believed, has been largely due to a mis-

<sup>1</sup> "The Importance of Uniformity for Purposes of Comparison," Dr. Samuel E. Sparling, Proc. National Municipal League, 1899.

understanding of their intent, and to the fact that all reforms of this sort generally require a number of years of agitation before they are adopted. The New York bill was the outcome of the work of two State commissions appointed by the Governor under an act of 1895 to prepare uniform charters for cities of the second and third classes respectively. The commissions reported separate charter acts, but united in recommending an act providing for a municipal government board to have the general supervision of cities of the second and third classes (all cities in the State except Greater New York and Buffalo). The board would prescribe uniform systems of accounting and reports for every municipal department, besides having power to investigate the affairs of municipalities with the aid of experts. Numerous other provisions were included in the bill, all designed to secure better municipal government (see references, in foot-note, to articles by Messrs. Holls and Jenks).

Another attempt to secure uniform accounts throughout a State is included in "The Revised Municipal Code of Ohio," prepared by a commission last year and submitted to the Legislature of 1900. The whole code failed of adoption, but very likely it will be brought before the legislature again. The code contained provisions relating to municipal accounting almost identical with those in the "Municipal Program" of the National Municipal League, given near the close of this article.<sup>1</sup>

This division of the review may be closed by a mention of the efforts to secure uniform State legislation throughout the country. This effort, it is believed, has been directed more particularly to such subjects as marriage, divorce, insurance and other corporation laws, but all organized efforts having uniformity as their object contribute to the same general end.

#### STATE ADMINISTRATIVE CONTROL OF SINGLE CLASSES OF MUNICIPAL SERVICE THROUGH COMMISSIONS.

The provisions for State control just reviewed relate chiefly to uniform accounting for municipalities as a whole. Far more has been accomplished by State commissions or boards devoted to only one line of municipal activity. These will be considered next.

No single class of municipal records is of more importance than vital statistics. This is so widely recognized that according to Mr. Robert H. Whitten:<sup>2</sup>

Some provision for a general registration of vital statistics is now made by statute in all but 14 States, though the law in many cases is wholly or partially inoperative.

<sup>1</sup>A series of substitute bills, including provisions for uniform accounting and State audit, was introduced in the same session and also failed to pass. See circular address in "Public Policy," April 21, 1900, issued by the Ohio State Board of Commerce, in which the drafting of the substitutes is credited to Allen R. Foote.

<sup>2</sup>"Trend of Legislation in the United States," by Robert Harvey Whitten, Ph.D., Sociology Librarian, University of the State of New York. State Library Bulletin, Legislation, No. 12, May, 1900.

Ten States "have maintained a fairly complete system" of "collection and publication of their vital statistics" for periods ranging from 57 to 2 years. These States, arranged both in chronological and geographical order, are as follows :<sup>1</sup>

Massachusetts .....	1842	Maine .....	1892
Connecticut .....	1848	New Hampshire .....	1880
Rhode Island .....	1853	Vermont .....	1857
Vermont .....	1857	Massachusetts .....	1842
New Jersey .....	1878	Rhode Island .....	1853
New Hampshire .....	1880	Connecticut .....	1848
Delaware .....	1881	New York .....	1893
Maine .....	1892	New Jersey .....	1878
New York .....	1893	Delaware .....	1881
Michigan <sup>2</sup> .....	1897	Michigan <sup>3</sup> .....	1897

In many States which have a partial or no system of State registration of vital statistics, individual cities and towns are doing work ranging all the way from mediocre to excellent. Even where the work is voluntary and isolated it possesses many elements of uniformity with all other statistical records of this class, not only within the particular State in question, but throughout this country, and, to a lesser degree, throughout the world.

Closely akin to the registration of vital statistics is some of the work done by State Boards of Health. Such boards now exist, in various degrees of efficiency, in all but five States (Georgia, Idaho, Montana, Oregon, and Wyoming) according to Mr. Whitten.

The chief work of these boards tending to uniformity of statistics within the several States, aside from that related to vital statistics, is due to the excellent laboratories, maintained by a few of them for the chemical, bacterial, and, more rarely, the microscopical analysis of water. In addition, several of these laboratories make regular analyses of sewage, in order to show what is being accomplished by sewage purification works. Massachusetts has led the way in this, as in so many other lines of modern work. For a dozen years or so it has made periodic analyses, often monthly, of water from the various public supplies of the State. It has gradually extended the same class of work to sewage purification works, collecting and presenting other information than analyses regarding these plants. It has also collected general statistical information regarding water-works, but in the line of uniform water and sewerage statistics its positive control extends little if any beyond its own laboratory. Vermont, Rhode Island, Connecticut, Delaware, Maryland, and Ohio are also analyzing water

<sup>1</sup> "The Past and Present Conditions of Public Hygiene and State Medicine in the United States." By Samuel W. Abbott, Secretary of the Massachusetts State Board of Health. Monograph XIX., American Social Economics, Dept. Social Economy for the U. S. Com. to the Paris Exposition. H. B. Adams, Editor.

<sup>2</sup> Michigan, Minnesota, Indiana, Kentucky, and Alabama have had "a partially complete collection of marriages, births, and deaths for several (a number of?) years."

from public supplies, and doing more or less in the way of general studies of stream pollution, but their work is far less extensive than that of Massachusetts.

Perhaps the oldest class of comparative municipal statistics available in this country are those relating to the public schools. State school funds have been distributed on the basis of school attendance for scores of years, and attempts have been made to secure uniform returns of children of school age, school attendance and various other particulars relating to schools. At present, every state in the Union has some form of central control over schools. Since 1867 we have had a national bureau of education, charged particularly with the collection of "such statistics and facts as shall show the condition and progress of education in the several States and Territories." Mention may also be made of the returns of assessed valuations and rates of taxation made in many States.

A body similar in some respects to boards of health is the State Sewerage Commission of New Jersey. So far as has been learned this is the only board authorized by law to require periodic reports from municipalities regarding their sewerage systems. The board was created in 1899, but is now working under a revised statute, passed this year. (Session Laws of 1900, Chap. 72). Sec. 10 of this act is as follows :

On or before Jan. 1, 1900, and thereafter, whenever required by said commission, the mayor of every municipality, and the chairman of every township committee of every township now having, using, owning, leasing or controlling a sewerage plant or system, shall furnish to said commission on blanks to be provided by said commission, a statement showing the disposition made of the sewage of their respective municipalities or townships, and as near as possible the amount discharged each 24 hours, and such other information and data as may be called for by said blanks, to be provided as aforesaid by said commission.

The commission submitted its first report, including returns relating to the sewerage systems of the State, to the New Jersey legislature of 1900.

State Highway Commissions, although having little or no control over records other than their own, are bringing together a rapidly-increasing amount of valuable statistical information relating to the construction of macadam, telford and gravel roads. Massachusetts and New Jersey have led in State road improvements in rural and suburban districts ; Connecticut has been giving State aid for a number of years, and New York has just begun. Rhode Island tried the plan for awhile, but abandoned it in 1899. A number of other States have established or appear to be moving towards State highway commissions and State aid, but with these, as with the majority of the commonwealths giving State aid, the contribution towards uniform statistics is more a promise for the future than an actual accomplishment. In reporting on the State roads actually built the various commissions in charge give such leading facts as the character of the

improvement, its width, depth and cost, and sometimes other figures of value. Massachusetts ranks first in the range and completeness of its highway statistics, and although these seem to relate wholly to the work done under its direction, the commission has had full authority from the start to collect general statistics relating to roads and streets. The act of 1892 (Chap. 338), establishing the commission, provided that county, city and town officers should, on request, give the State commissioners

any information required by them concerning the public ways, roads or bridges within their jurisdiction,

while in 1893 an act (Chap. 476) enlarging the scope of the commission, stated that it should

from time to time compile statistics relating to the public roads of cities, towns and counties, and make such investigations relating thereto as they (it) shall deem expedient,

at the same time renewing the clause first quoted. The statistics published by the Massachusetts Highway Commission are unequalled in this country. They show, among other things, the physical characteristics of the improvements made under its direction, their cost, the character and cost of the maintenance of State roads, and the results of a long series of laboratory tests on stones used or proposed for use in highway construction throughout the State. Perhaps if the other State commissions had been as amply equipped with funds and legislative powers they would not have lagged so far behind Massachusetts in their statistical work, but it is only fair to Massachusetts to say that the personnel of its commission would have ensured valuable results under the most adverse circumstances.<sup>1</sup>

Still more unique, in some respects, than the Highway Commission and State Board of Health of Massachusetts is its Gas & Electric Light Commission, the only body of the sort on this continent. This commission has recently issued its fifteenth annual report, a volume containing, like its predecessors, a wide range of statistical and descriptive matter regarding each of the gas and electric lighting plants of the State, whether under private or public ownership. When the commission was established its jurisdiction extended to gas plants only, but in 1887 it was given the same power over electric lighting plants, and its authority has been extended from time to time since. It prescribes the forms to be used by the various works in keeping accounts and in making reports of the commission.

Another class of municipal service covered by State commissions is street railways. The railway commissions of Maine, Massachusetts, Connecticut and New York collect quite extensive statistics regarding the street railways of their several States, the details of operation

<sup>1</sup> Reports have been made by the Commissioner of Public Roads of New Jersey each year, beginning with 1894, when State aid was first given. The Connecticut Highway Commission began its work in 1895, and has reported on each year's work since, but as two years' reports are published together, the report for 1899 is not available. Reports for the Vermont Highway Commission were issued in 1894 and 1896, but contained only a few statistics.

being particularly full. The Rhode Island and North Carolina commissions make less complete exhibits. The Illinois commission gives pretty full returns for lines in Chicago. The Vermont commission has had control of electric street railways since 1898. Perhaps some other States should be included in the list. The commissions for the first four States named publish quite a number of items identical in character, or readily comparable. The last report of the Connecticut commission includes a schedule, adopted by several voluntary organizations, designed to secure uniform accounting in the various States. This schedule has already been adopted by the Connecticut commission for use by all the street railways of that State after June 30, 1900, and it is reported that it has been recommended for adoption in all the other States whose railway commissions have annual joint meetings with the Interstate Commerce Commission.

Among the various investigations undertaken by State bureaus of labor statistics some have been more or less closely related to municipal questions, and have tended or will tend towards uniformity. Probably the bulk of this work, however, has done more to show the need of uniform municipal statistics than to bring them into existence. Notable among the inquiries attempted by these boards has been one carried out in many States to determine the relative advantages of municipal and private ownership of water-works and lighting plants. The results in some States have been published in the annual reports of the corresponding boards. The inquiry has been supplemented by the U. S. Department of Labor, whose report for 1899 is devoted to statistics relating to municipal and private ownership of water, gas and electric light plants.

Another important undertaking by the U. S. Department of Labor is the collection of statistics of cities having a population of 30,000 and upwards (see Appendix I). Like the investigation of municipal ownership, this undertaking has also shown the deplorable lack of uniformity in municipal accounts and reports.

There are two classes of records, which, while not strictly municipal, are sometimes kept by cities and towns, and are very essential to the design and operation of some of the most important municipal works. These are meteorological statistics and stream gagings. Through our national and state weather bureaus uniform meteorological records are being kept in many cities distributed over the whole country. The hydrographical department of the U. S. Geological Survey and departments of some of our States are making periodic stream gagings at various widely-distributed points. In addition to national and State work in these two lines many cities have maintained meteorological and stream gaging stations for years past, thus adding to the records available for comparative purposes.

#### THE WORK OF VOLUNTARY NATIONAL ORGANIZATIONS.

What appears to be the most promising recent attempt to secure interstate uniformity in any branch of municipal statistics has already

been mentioned in connection with street railway returns to the Connecticut Railroad Commission. According to the last report of that body a committee to devise a uniform system of street railway accounts and reports was appointed in May, 1897, by the National Convention of Railroad Commissioners, which met jointly with the Interstate Commerce Commission at St. Louis. Without going into the details of the succeeding steps, it may be stated that at the meeting of the same association held in Denver, in August, 1899, the committee in question submitted a report which in the meantime had been revised and adopted by the Street Railway Accountants' Association of America, and had also been approved by the Association of American Railway Accounting Officers. This report was adopted by the Denver convention, so that it now has the sanction of three separate voluntary national organizations, one made up of State officials, and the other two drawing their membership from street railway and general railway accountants respectively. The schedule in question occupies 77 pages of the report of the Connecticut Railroad Commission for 1899. Its scope is partly indicated by its title :

*A Standard System of Street Railway Accounting, Covering the Classification of Construction and Equipment Accounts, Classification of Operating Expense Accounts, and Forms of Monthly and Annual Reports.*

As has been stated, this standard system has been prescribed by the Connecticut Railroad Commission for all the street railways of that State and recommended in other states. If it is as admirable a system of accounts and reports as is indicated by its origin and by a hasty examination of its details, it is to be hoped that it will be adopted by all other State railroad commissions.

The earliest achievement by a voluntary organization in securing the adoption by its members of a system of uniform municipal reports, so far as can be learned, falls to the credit of the New England Water Works Association, a body with greater geographical breadth than is implied by its name. In June, 1885, this association adopted a scheme for the statistical portion of the annual reports of water departments, as submitted by a committee consisting of Messrs. William R. Billings and R. C. P. Coggeshall.<sup>1</sup> This schedule is a model of its kind, not being so ambitious as to defeat its object through over-elaborateness, but yet presenting a comprehensive summary of the character of the works in question, and their operation during the year, and at the same time going into detail in a few essential particulars. Just how many works have adopted this form we cannot say, but the number has been sufficient to warrant the tabulation of the chief items by cities, and the presentation of the results from time to time in the *Journal of the New England Water Works Association*. In this way, comparative figures have been given for the years 1886 to 1896, inclusive. The<sup>1</sup> greatest number of cities represented in any

<sup>1</sup> Trans. N. E. Water Works Association, 1885, p. 118.

one table has been 23, (since increased to 28). This figure, it is true, was only a small percentage of the membership of the association, and a far smaller percentage of all the water works in the country. At the annual meeting of the association, in September, 1900, the matter of co-operating with other societies to secure uniform statistics was presented and provision was made for the appointment of a committee to consider the proposition and to report on a revision of its schedule. A month or two before the adoption of this report by the New England Water Works Association, a similar committee consisting of Messrs. J. J. R. Croes, M. Am. Soc. C. E., and Chas. G. Price, submitted a brief outline for a uniform system of annual reports to the American Water Works Association. No action on the report seems to have been taken by the convention further than to order it printed with the proceedings, and it appears that the good work done by the committee stopped when it submitted its report, although the form may have been used awhile by a few works.<sup>1</sup>

In 1898, the Committee on Municipal Data, consisting of Messrs. Charles C. Brown, Bloomington, Ill., Lansing H. Beach, Washington, D. C., and A. D. Thompson, Peoria, Ill., submitted to the American Society of Municipal Improvements three forms for making up annual reports on water-works, sewerage and street paving, respectively. In 1899, the same forms were again submitted to the society, having been under consideration by the committee during the intervening year. It does not appear that the forms were adopted by the society at either meeting. So far as the committee knew, no members had used the forms in making up annual reports, and, more discouraging still, although the committee had urgently requested members to criticise the forms, none had done so during the year. The committee was continued for another year, Mr. Brown remaining in service, but Messrs. L. E. Farnham, of Camden, N. J., and David Hunter, Jr., of Allegheny, Pa., being substituted for the other two original members. In 1900, Mr. Brown submitted a third report from this committee, continuing its former recommendations, and advising co-operation with other societies. The committee was continued, and was consolidated with another one, appointed in 1899, to secure the inclusion of municipal statistics in the census of 1900.<sup>2</sup>

The Central States Water-Works Association also appointed a committee on this subject in 1900, so that if the American Water-Works Association renews its interest in the subject at its annual convention in the first part of 1901, as it very likely will, there will be four societies at work on uniform water-works statistics.

About 1890, the Western Gas Association perfected a form for reporting on gas operations up to gas in the holder, but it appears that nothing further came of the action. At the meeting of the same association a few weeks ago, Mr. W. E. Steinwedell, of Belleville, Ill.,

<sup>1</sup> Proc. Am. W. W. Assoc., 1881-6, p. 257.

<sup>2</sup> See Proc. Am. Soc. Municipal Improvements, 1898-99-1900.



presented a paper entitled "Monthly Technical Report of Operations in Coal Gas Works," which included a schedule for uniform reports. Later on, a motion looking to the securing of uniform reports was unfavorably received.

The American Gas Light Association at its Denver meeting in October, 1900, appointed a committee on this question.<sup>1</sup>

At the last meeting of the National Electric Light Association, held at Chicago in May, 1900, Mr. Jas. B. Cahoon, of Syracuse, N. Y., submitted detailed forms for uniform gas and electric lighting accounts. The convention voted to have the committee prepare a system of uniform accounting, to be presented at the next annual meeting.<sup>2</sup>

Uniform laboratory methods and results would be of great advantage to engineers and others engaged in municipal work. In 1895, the National Brick Manufacturers' Association inaugurated an "investigation of the methods employed in testing paving brick, with a view to establishing some standard method if possible."<sup>3</sup> A committee of seven was appointed to carry on this work. The committee chose Mr. D. W. Mead, M. Am. Soc. C. E., now of Chicago, as chairman, and Prof. Edw. Orton, Jr., of Columbus, O., as secretary. It submitted its final report to the association at the meeting held in February, 1897. The report, as adopted by the association, is printed in the proceedings of the latter for 1897.

Of more general interest to engineers than the standard for paving brick tests is uniformity in methods of testing cement, a subject which has been under investigation for two years by a committee of the American Society of Civil Engineers. A progress report of this committee was reviewed editorially in the *Engineering News*, June 21, 1900. Cement now enters so extensively into various classes of municipal work that uniform methods of making and reporting the tests would be very advantageous.

Still another class of laboratory work where uniformity is highly desirable is water analysis. The American Public Health Association now has a Committee on Standard Methods of Water Analysis, with Mr. Geo. W. Fuller, Assoc. M. Am. Soc. C. E., of New York, as chairman, and Mr. Geo. C. Whipple, Assoc. M. Am. Soc. C. E., as secretary. The committee was appointed in November, 1899, and presented a valuable report at the annual meeting of the association, at Indianapolis, Ind., in October, 1900.

The American Public Health Association also deserves great credit for its endeavors to improve the classification of vital statistics. In 1893, the system of Dr. Jacques Bertillon, Chief of Statistics of the

<sup>1</sup> At the same meeting a paper on "Government Control of Gas Rates" was read by Mr. Alfred E. Forstall, Secretary of the Association.

<sup>2</sup> One of Mr. Cahoon's chief objects in submitting the paper and schedules was to stem the tide in favor of municipal ownership and reduction in rates for lighting service. See *Engineering News*, June 14, 1900, for abstract bringing out these points.

<sup>3</sup> "First Annual Report of the Committee on Technical Investigation," National Brick Manufacturers' Association, 1899.

city of Paris, was brought to the attention of the American public by means of a paper by Dr. Bertillon, read before the International Statistical Association, at Chicago. The subject was taken up, the same year, by the American Public Health Association, and after subsequent committee work, it was endorsed by the association in October, 1898. Dr. S. W. Abbott states, in his monograph, previously cited, that :

This committee, through the commendable activity of its secretary, Dr. Wilbur, has accomplished much toward the introduction of the system in several of the registration States, and in some of the larger cities. A very full and complete presentation of the system, with minor details and adaptations to an American population, is printed in the monthly bulletin of vital statistics of Michigan, beginning with February, 1898.

During the summer of 1900, representatives of 26 countries joined at Paris in the revision of the Bertillon classification and adopted the "First International Decennial Revision, Paris, 1900", with provisions for further revisions at the end of each decade. The following organizations have recommended the general adoption of the Bertillon classification on Jan. 1, 1901: International Congress of Hygiene and Demography; International Statistical Institute; American Public Health Association; and International Conference of State and Provincial Boards of Health. All but one of the American registration states and a number of prominent American cities have adopted the classification.<sup>1</sup> Summaries for the various countries of the globe will be published, according to present plans, under the direction of Dr. Bertillon.

Finally, it remains to be said for the American Public Health Association, that its committee on Demography and Statistics in their Sanitary Relation was reorganized in 1900 and authorized to join with other societies in the move for uniform municipal statistics.

In August 1898, the League of American Municipalities adopted resolutions strongly in favor of uniform municipal accounting throughout each State, a State audit for the accounts of both municipalities and of private corporations rendering municipal service, the publication of comparative statements "showing the results of municipal administration," and of accounts "designed to show the entire and true costs of all public utilities operated by any municipality or private corporation." At the meeting of this organization, Dec. 12-15, 1900, a paper was presented on uniform accounting, as listed in the bibliographical foot notes, and it was decided to join in the movement.

In December, 1898, a committee of the National Municipal League reported to that body a "Municipal Program" containing admirable

<sup>1</sup> See "The Bertillon Classification of Causes of Death," Supplement to "*Michigan Monthly Bulletin of Vital Statistics*," Oct., 1900: Cressy L. Wilbur, Lansing, Mich., Editor. The full revised classification may be obtained from Dr. Walter Wyman, Supervising Surgeon General, U. S. Marine Hospital Service, Washington, D. C.

provisions relating to municipal accounting along much the same line as the resolutions noted just above, but in definite shape for incorporation in State constitutions and municipal charters. This Program, after being referred back to the committee, was again reported to the National Municipal League in November, 1899, and adopted, including the provisions in question. These required every city to make financial reports at least yearly to some State official, in accordance with forms and methods prescribed by him, which shall be applicable to all cities within the State; such reports shall be printed as a part of the public documents of the State.

The contents of these reports is specified in outline. The State official to whom they are made would not have the power of general audit, but would be authorized "to examine into the affairs of the financial department of any city within the State." The Program also calls for the publicity of the accounts of all corporations operating under municipal franchises.

The Municipal Program is an admirable model for a city or town charter. The particular features just cited are directly in line with legislation enacted or proposed in several States, as already noted in the first part of this article.

At the last convention of the National Municipal League, held at Detroit, September, 1900, several papers on uniform accounting were presented<sup>1</sup> and the following resolution was adopted:

*Resolved*, That the chairman of the Executive Committee be authorized to appoint from the membership of the League or otherwise, a committee to give special consideration to the subject of uniform municipal accounts and statistics; and to that end to confer with similar committees representing other organizations; and in its discretion to prepare and report to the National Municipal League or its Executive Committee such methods or systems of municipal accounts and collection of municipal statistics as it may find to be most desirable. (Since the foregoing was put in type, word has been received that the American Statistical Association has appointed a committee on uniform municipal accounts and statistics.)

Doubtless most of those who read the foregoing will be surprised to learn how many activities there are tending towards uniform municipal records and reports. But although the list is long the sum total of results is small, compared with what remains to be accomplished. The national government has done, and in the nature of the case can do, but little to secure a uniform system of keeping municipal records. Although there are many States which have done something to secure uniformity, the number of those which have taken up any single line

<sup>1</sup> "Uniform Municipal Accounting," by M. N. Baker; discussion by Jas. Blake Cahoon and Harry B. Henderson. This same general subject was also presented by Mr. Baker, in August and September, 1900, before the annual conventions of the American Society of Municipal Improvements, the Central States Water-Works Association, and the New England Water-Works Association.

of municipal undertakings is small, and of those that have made a decided success of the attempt is smaller still. This is particularly true of the work in which engineers are most interested, such as sewers, pavements and roads, water-works, lighting plants and street railways. In addition to the comparatively small amount of work done by the several States, that accomplished in the different commonwealths is generally so dissimilar as to rob it of a large part of its possible value. Nevertheless, it is very encouraging to see that so much has been done by State legislatures and by the administrative officers created under their acts. The movement as a whole is well under way, and is bound to increase in volume and speed. What is most needed now is unification of methods, both within each State and between the several States. Of the various possible means of bringing this about, as well as extending the movement as a whole, no agency is more promising than the various organizations of engineers, municipal officials and others interested in good city government. Much that has been accomplished thus far is largely due to these societies, and to them we must continue to look. Made up, as their membership is, of citizens from various parts of each State, and from most or all the States of the Union, their influence upon State legislatures is often very great, and by well-directed effort may be increased. The members of these societies not only realize more keenly than the general public the value of uniform statistics ; they are also peculiarly fitted by education and professional experience to devise a system for securing such uniformity.

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If strong committees from these societies could be appointed to co-operate with the representatives of the three organizations first named, much might be accomplished in the interest first of securing and afterwards of collecting uniform municipal statistics. The various organizations could expect the hearty co-operation of a host of State and local engineering societies, State municipal leagues and other associations. These State and local societies would not only give valuable suggestions, but they would have a great and almost indispensable influence in securing the legislative action required to ensure uniform municipal records throughout the country.

### APPENDIX III.

#### MEMBERSHIP OF COMMITTEES ON UNIFORM ACCOUNTS AND STATISTICS, APPOINTED BY VARIOUS ORGANIZA- TIONS DEVOTED TO OR INTERESTED IN MUNICIPAL AFFAIRS.

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##### AMERICAN ECONOMIC ASSOCIATION.

M. N. Baker, 220 Broadway, New York City.  
Prof. H. B. Gardner, Providence, R. I.  
<sup>1</sup>Prof. Chas. J. Bullock, Williamstown, Mass.  
Dr. Ed. W. Bemis, Mount Vernon, N. Y.  
Prof. E. Dana Durand, Bliss Building, Washington, D. C.  
Prof. F. R. Clow, Oshkosh, Wis.

##### AMERICAN GAS LIGHT ASSOCIATION.

A. C. Humphreys, 31 Nassau St., New York City.  
A. P. Lathrop, 6th and Jackson Sts., St. Paul, Minn.  
Lewis Lillie, Broad and Arch Sts., Philadelphia.

##### AMERICAN STATISTICAL ASSOCIATION.

Wm. M. Cole, Fall River, Mass.  
Howard H. Cook, City Hall, Boston, Mass.  
Prof. H. B. Gardner, Providence, R. I.  
Prof. C. W. Tooke, Urbana, Ill.  
Prof. John H. Gray, Evanston, Ill.  
Dr. John R. Commons, Mount Vernon, N. Y.  
G. W. W. Hanger, U. S. Dept. Labor, Washington, D. C.

##### AMERICAN SOCIETY OF CIVIL ENGINEERS.

Samuel Whinery, 95 Liberty St., New York City.  
Rudolph Hering, 100 William St., New York City,  
James Owen, Montclair, N. J.

##### AMERICAN SOCIETY OF MUNICIPAL IMPROVEMENTS.

Charles C. Brown, Commercial Club Bldg., Indianapolis, Ind.  
Capt. H. C. Newcomer, 464 Louisiana Ave., Washington, D. C.  
F. W. Cappelen, Minneapolis, Minn.

<sup>1</sup>Resigned.

## AMERICAN PUBLIC HEALTH ASSOCIATION.

Dr. John S. Fulton, Baltimore, Md.  
Dr. Charles V. Chapin, Providence, R. I.  
Dr. H. M. Bracken, Minneapolis, Minn.  
Dr. Cressy L. Wilbur, Lansing, Mich.  
Dr. William H. Welch, Baltimore, Md.  
M. N. Baker, New York City.  
Dr. William C. Woodward, Washington, D. C.  
Dr. Samuel W. Abbott, Boston, Mass.

## CENTRAL STATES WATER WORKS ASSOCIATION.

W. A. Veach, Newark, O.  
W. B. Mitchell, Piqua, O.  
Fred J. Catlin, Flint, Mich.

## LEAGUE OF AMERICAN MUNICIPALITIES.

J. A. Johnson, Prest., Fargo, N. D.  
John MacVicar, Sec'y., Des Moines, Iowa.

## NATIONAL ELECTRIC LIGHT ASSOCIATION.

E. W. Poole, 100 Broadway, New York City.  
W. F. Ham, Washington, D. C.  
G. E. Tripp, 2 P. O. Square, Boston, Mass.  
W. A. Anthony, Chicago, Ill.

## NATIONAL MUNICIPAL LEAGUE.

Dr. E. M. Hartwell, City Hall, Boston, Mass.  
Prof. J. W. Jenks, Ithaca, N. Y.  
M. N. Baker, 220 Broadway, New York City.  
Dr. Milo R. Maltbie, 52 William St., New York City.  
H. S. Chase, Boston, Mass.  
Simon Sterne, William and Beaver Sts., New York City.  
Harry B. Henderson, Cheyenne, Wyo.  
Prof. Samuel E. Sparling, Madison, Wis.  
Dr. Albert Shaw, 13 Astor Place, New York City.  
Dr. Edward W. Bemis, Mount Vernon, N. Y.  
Clinton Rogers Woodruff, Girard Building, Philadelphia.  
Chas. W. Haskins, 30 Broad St., New York City.  
Frederick A. Cleveland, University of Pennsylvania, Philadelphia, Pa.

## NEW ENGLAND WATER WORKS ASSOCIATION.

Joseph E. Beals, Middleborough, Mass.  
George F. Chace, Taunton, Mass.  
J. C. Whitney, West Newton, Mass.

NEW JERSEY SANITARY ASSOCIATION.

M. N. Baker, 225 Broadway, New York City.

Dr. Henry Mitchell, Trenton, N. J.

Dr. Elias J. Marsh, Paterson, N. J.

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In addition to the above, assurances have been received that the following organizations will take the subject under consideration later on : American Water Works Association, Peter Milne, Secretary, Bennett Building, New York City ; Western Gas Association, John W. Dunbar, Secretary, New Albany, Ind. ; Illinois Society of Engineers and Surveyors, M. S. Ketchum, Secretary, Champaign, Ill. ; International Association of Municipal Electricians, F. P. Foster, Secretary, Corning, N. Y. ; National Civic Federation, Ralph M. Easley, Secretary, First National Bank Building, Chicago.